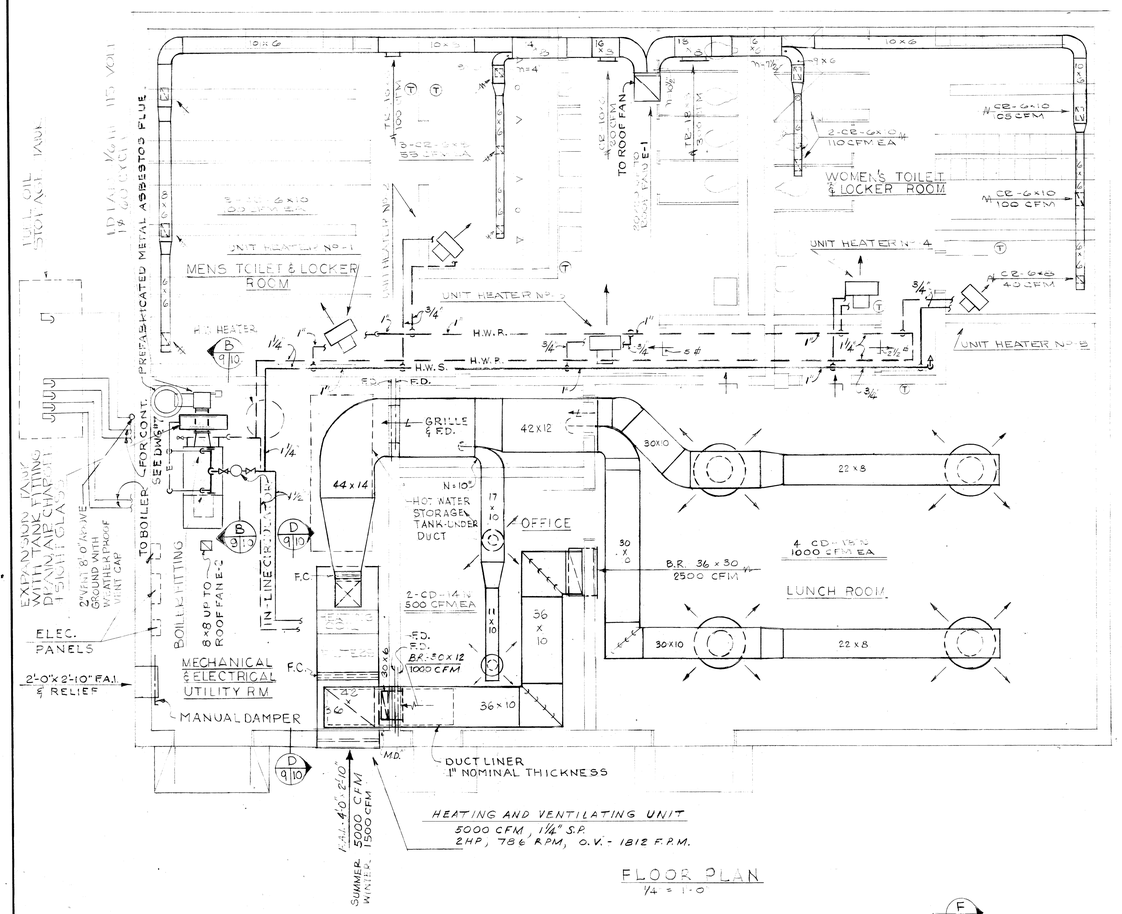


FLOOR PLAN
1/4 = 1'-0"

BOILER SCHEDULE

HEATING ZONE	NET S.B.I. RATING BTU PER HOUR
+20°	144,325
0°	210,402
-20	269,124

GAS BURNER

HEATING ZONE	FIRING RATE CU.FT. PER HR.
+20°	336
0°	427
-20°	504

BASED ON 1,000 BTU PER CU.FT.

OIL STORAGE TANK

HEATING ZONE	TANK CAPACITY GALLONS
+20	275
0°	550
-20	1000

OIL BURNER

HEATING ZONE	FIRING RATE GAL. PER HR.
+20°	2.40
0°	3.05
-20°	3.60

EXPANSION TANK SCHEDULE

HEATING ZONE	CAPACITY GALLONS
+20°	24
0°	24
-20°	30

HOT WATER CIRCULATING PUMP SCHEDULE

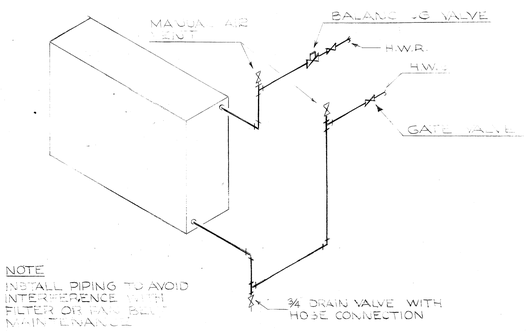
HEATING ZONE	CAPACITY G.P.M.	HEAD FT.	MOTOR HP
+20°	12	15	1/6
0	18	5	1/4
-20°	22	15	1/3

HEATING COIL SCHEDULE

HEATING ZONE	ENT AIR	LVG AIR	GPM	SUPPLY & RETURN
+20°	53	78	11	1"
0°	41	73	16	1 1/4
-20°	43°	80	20	1 1/2

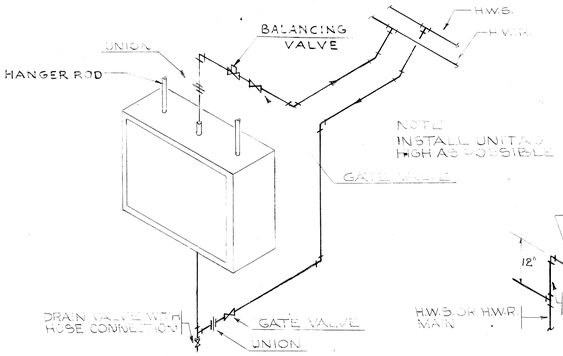
EXHAUST FAN SCHEDULE

FAN No.	CFM	S.P. IN W.G.	WHEEL INLET AREA ft²	MAX. TIP SPEED FPM	DRIVE TYPE	MOTOR HP APPROX	ELECTRICAL VOLT	PHASE
E-1	1450	1/2	1.765	4050	V-BELT	1/3	115	1
E-2	300	1/8	.20	3048	DIRECT	1/20	115	1

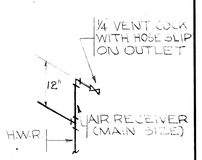


NOTE
INSTALL PIPING TO AVOID INTERFERENCE WITH FILTER OR TUBE MAINTENANCE

HOT WATER HEATING COIL PIPING



UNIT HEATER PIPING

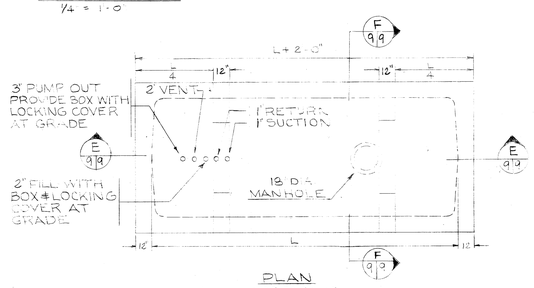


MANUAL AIR VENT

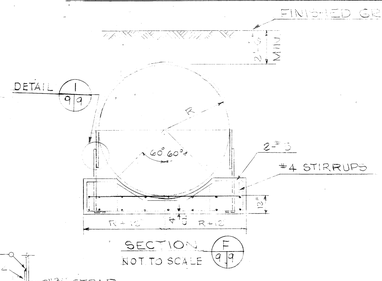
UNIT HEATER SCHEDULE

UNIT No.	HEATING ZONE	CAPACITY BTUH	G.P.M.	CFM	MOTOR HP
UH-1	+20°	14,740	1.47	543	1/30
	0°	21,140	2.07	315	1/20
	-20°	28,340	2.85	515	1/20
UH-2	+20°	1,930	.195	315	1/40
	0°	3,000	.300	543	1/30
	-20°	3,700	.515	543	1/30
UH-3	+20°	4,700	.470	543	1/30
	0°	7,590	.720	1142	1/30
	-20°	9,800	.950	543	1/30
UH-4	+20°	12,800	1.28	543	1/30
	0°	18,000	1.80	515	1/30
	-20°	23,100	2.31	515	1/30
UH-5	+20°	2,870	.287	315	1/40
	0°	3,350	.335	543	1/30
	-20	4,300	.430	515	1/30

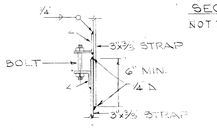
1- CAPACITY BASED ON 200° ENTERING WATER AND 60° ENTERING AIR TEMPERATURES.
2- MOTORS ARE 115 V - 1 Ø.
3- HORSE POWER SHOWN ARE APPROXIMATE.



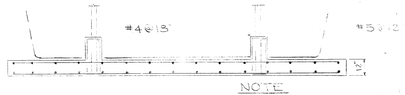
PLAN
NOT TO SCALE



SECTION
NOT TO SCALE



DETAIL
NOT TO SCALE



SECTION
NOT TO SCALE

NOTE
SLOPE TANK 1/8 PER FOOT TOWARD PUMP OUT CONNECTION

DETAIL - UNDERGROUND OIL STORAGE TANK

GENERAL NOTES

1- INSTALL MANUAL AIR VENTS AT HIGH POINTS OF ALL HOT WATER PIPING.
2- ALL HANGER RODS FOR HEAT. & VENT. UNIT TO BE MINIMUM 1/2" DIAMETER STEEL RODS.
3- FOR WALL LOUVERS, BELOW DAMPERS, TRANSFER LOUVERS & RETURN GRILLES, SEE ARCHITECTURAL DRAWINGS.
4- INSTALL DUCT WORK ABOVE CEILING IN OFFICE & LUNCH ROOM.
5. FOR ROOF CURB & FLASHING FOR ROOF FAN SEE ARCHIT. DRAWINGS.

SYMBOLS

HW	HOT WATER SUPPLY
HR	HOT WATER RETURN
CD	CEILING DIFFUSER
CR	CEILING REGISTER
GR	WALL GRILLE
RAG	FREE AREA INTAKE
CFM	CUBIC FEET PER MIN.
MD	MOTORIZED DAMPER
T	THERMOSTAT
L	LOUVER
MAV	MANUAL AIR VENT
GPM	GALLONS PER MIN.
RA	RETURN AIR
OA	OUTSIDE AIR
F.C.	FLEXIBLE CONNECTION
I.D.	INDUCED DRAFT
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED

H.P. HORSE POWER
M.B.H. THOUSAND B.T.U. HR.

GRAPHIC SCALE:
1/4 = 1'-0" 5 0 5

SYMBOL	DESCRIPTION	DATE	APPROVAL
	REVISIONS		

AMMANN & WHITNEY
CONSULTING ENGINEERS
111-8TH AVENUE, NEW YORK, N.Y.

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
MILITARY CONSTRUCTION-ENGINEERING DIVISION
WASHINGTON, D.C.

DRAWN BY: G.S.
TRACED BY: G.S.
CHECKED BY: S.S.
SUBMITTED BY: AMMANN & WHITNEY

AMMUNITION MAINTENANCE FACILITY
LUNCH ROOM-CHANGE HOUSE
ALTERNATE NO. 2
HEATING & VENTILATION, PLAN & DETAILS

APPROVED: CHIEF UTILITIES BRANCH
APPROVED: CHIEF ENGINEERING DIVISION, MIL. CONSTR. O.C.E.
DATE: 18 JULY 1966
APPROVED FOR
DATE:
SCALE 1/4" = 1'-0"
SPEC. NO. 16-06-324-66CE
DRAWING NUMBER 36-49-03
SHEET 9 OF 10